

## Simulated Effects of Comprehensive Tax Reform in the United States

At this point, it is useful to perform a comprehensive tax reform simulation and examine its consequences for endogenous variables in our model. In this simulation, factor tax rates are *flattened*. This simulation should not be confused with any of the flat tax proposals under consideration. The purpose of this simulation is to consider the implications to industrial composition and welfare of unequal factor taxation and the interregional terms of trade effects that occur in a robust, regionalized, open economy.

### Specification of Simulation

Our simulation of comprehensive tax reform in the United States is specified as follows. Both Federal and State/regional insurance trust taxes (for example, social security) on wages remain unchanged at their 1994 rates. Border taxes (import tariffs and export subsidies on international trade) also remain unchanged. All other tax instruments in the model are eliminated and replaced with a flat (equal rates on all primary factors) *ad valorem* tax on all primary industry factors: land, depreciable assets, shelter, and labor. The rate of this flat tax is endogenously determined, so that the new tax regime is revenue neutral.

The effects of this simulation are decomposed using three different simulations. First, we simulate Federal tax reform only, such that all State/regional tax policies remain intact. Second, we simulate State/regional tax reform, such that Federal tax instruments are not changed. Third, we simulate simultaneous Federal and State/regional revenue-neutral tax reform.

### Overview of Tax Policy Change

The effects of our simulation will be largely determined by the magnitude of the tax rates that will be flattened, and the relative level of each affected primary factor, industry, and regional economy within the national economy. In this section, we provide an aggregate analysis of the relevant Federal and State/regional tax rates to prepare the reader for the simulation results presented in the next section.

The flat rate of Federal factor taxes at the industry level that generates the same amount of taxes for the Federal Government is 21.99 percent (last row in table 7). In our simulations, labor contributions to the Federal insurance trust fund (for example, social security) remain at 10.17 percent, in addition to the 21.99-percent income tax. Thus, in our simulation, the overall rate (including labor trust fund contributions) of primary factor taxation is 28 percent.

The flat rate of State/regional factor taxation at the industry level that generates the same amount of taxes for each State/regional government is given in the last row in table 8. In our simulations, labor contributions to State insurance trust funds remain at 3.99 percent, in addition to the tax rates in the last row in table 8.

Table 7 shows that Federal tax rates increase for most agricultural industries, which suggests that for the United States as a whole, resources would leave agriculture. However, the regional implications for agricultural output may be different from the national outcome. For example, tax rates for agriculture in the Delta and Northeast regions increase the most in the United States, while tax rates for agriculture in the Lake States, Mountain, and Pacific regions increase the least. We expect agricultural industries in the Delta and Northeast regions to decline. Agricultural industry in the Lake States, Mountain, and Pacific regions are expected to expand. Federal tax rates are cut for food processing and manufacturing industries, with tax cuts in food processing being larger than the tax cuts in manufacturing (table 7). However, production costs in food processing may not decline that much because agricultural prices are expected to increase (due to increased taxes on agriculture). For example, food processing in the Appalachian region will face the biggest tax cuts. Thus, we expect food processing in the Appalachian region to expand substantially. However, agriculture in the Appalachian region (and elsewhere) will face substantial tax increases, which will raise costs to food processing.

**Table 7—Overall Federal tax rates of primary factors, by industry and region**

Tax policy/ industry	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific
<i>Percent</i>										
Overall tax rates, including social security:										
Agriculture	20.42	23.83	24.11	25.89	23.67	20.23	24.35	22.49	25.25	24.86
Capital-intensive agriculture	21.86	23.61	24.42	25.94	23.66	20.65	24.02	23.49	25.23	24.19
Processed foods	35.26	36.92	36.98	36.29	35.86	35.63	35.74	35.91	36.63	36.38
Capital-intensive processed foods	35.82	38.42	37.07	37.20	36.27	36.24	36.40	36.14	37.06	36.40
Manufacturing	34.49	35.94	36.39	35.59	34.94	35.48	35.75	35.56	35.64	35.50
Capital-intensive manufacturing	34.81	36.18	35.63	36.17	35.44	34.32	36.39	35.02	35.64	34.98
All other industries	28.85	30.12	29.03	30.02	29.06	27.80	29.39	28.80	29.46	29.95
Industry-level average	30.38	32.00	30.45	31.67	30.91	29.24	30.50	29.70	30.49	30.34
Industry/household	26.08	32.54	26.92	29.32	29.52	26.39	31.20	25.52	26.57	24.86
Flat tax, industry level:										
Including social security tax	28.12	28.12	28.12	28.12	28.12	28.12	28.12	28.12	28.12	28.12
Excluding social security tax	21.99	21.99	21.99	21.99	21.99	21.99	21.99	21.99	21.99	21.99

**Table 8—Overall State/regional tax rates of primary factors, by industry and region**

Tax policy/ industry	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific
<i>Percent</i>										
Overall tax rates, including labor insurance tax:										
Agriculture	15.91	8.16	8.57	15.46	11.80	6.19	11.11	12.08	10.28	11.84
Capital-intensive agriculture	14.75	8.03	7.97	13.92	12.14	6.29	10.97	11.43	10.35	12.83
Processed foods	11.45	6.89	4.56	10.20	8.81	7.73	7.63	8.88	7.12	8.51
Capital-intensive processed foods	11.43	6.79	4.46	10.12	8.42	6.19	6.06	9.27	7.67	8.56
Manufacturing	11.06	7.57	4.69	9.93	9.13	7.62	8.06	8.16	8.37	9.04
Capital-intensive manufacturing	11.82	6.82	4.53	10.20	8.60	6.36	6.53	7.94	6.13	8.98
All other industries	12.37	7.10	6.33	13.44	9.53	6.13	8.21	8.97	8.82	9.51
Industry-level average	12.06	7.19	6.00	12.40	9.39	6.41	8.26	8.87	8.70	9.42
Flat tax, industry level:										
Including labor insurance tax	13.52	11.69	10.67	13.39	11.05	10.58	11.41	10.65	11.77	12.19
Excluding labor insurance tax	11.32	9.58	8.66	11.13	8.90	8.54	9.27	8.67	9.72	10.09

**Table 9—Tax reform at Federal and State/regional levels**

Tax policy/ industry	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific	U.S.	ROW
<i>Percent</i>												
Output change:												
Agriculture	-0.33	-2.59	0.33	1.18	0.14	-2.11	-0.59	0.22	0.80	3.73	0.40	-0.07
Capital-intensive agriculture	-1.92	-5.40	-1.01	-1.24	0.19	-3.61	-1.22	-0.95	0.60	2.55	-0.58	-0.09
Processed food	0.88	-2.12	0.06	-0.73	-0.46	0.50	-0.40	1.12	0.31	2.30	0.10	-0.01
Capital-intensive processed food	-0.33	3.89	0.21	-2.15	-3.42	1.54	-2.47	1.36	2.07	3.12	1.12	-0.06
Manufacturing	1.04	-3.38	-0.29	-1.13	-0.48	1.40	-1.99	1.31	0.93	2.11	0.01	0.06
Capital-intensive manufacturing	2.82	-2.56	-0.45	0.96	-0.78	-0.49	-1.76	0.55	-2.19	2.10	0.22	0.10
All other industries	-0.46	1.28	0.07	0.38	0.30	-0.20	0.55	-0.20	-0.15	-0.69	-0.05	-0.01
Factor price change:												
Land	2.23	1.61	5.45	6.60	4.78	0.36	6.39	0.36	3.95	7.96	NA	-0.43
Labor	-6.78	2.40	-2.59	-5.48	-2.95	0.11	1.54	-5.69	-3.61	-4.69	NA	-0.25
Capital	4.75	10.67	4.88	9.38	7.49	0.77	7.53	2.56	4.00	0.97	NA	-0.25
Welfare effects:												
Terms of trade change	-0.08	0.34	0.08	0.06	0.08	-0.01	0.17	-0.08	0.10	-0.21	NA	-0.18
Income change	-1.11	3.79	0.37	0.77	1.23	-0.18	2.66	-1.24	-0.18	-1.68	NA	-0.25
Welfare change	-0.93	3.19	0.24	0.64	0.97	-0.21	2.09	-0.94	-0.19	-1.35	NA	-0.05
<i>Billion dollars</i>												
Welfare index:												
Equivalent variation	-11.36	15.13	1.02	2.27	7.22	-0.27	2.15	-2.79	-0.41	-11.34	1.62	-1.07

NA = Not applicable.

Table 8 shows that agriculture in most regions will face a cut in State/regional taxes. Exceptions to this are the agricultural industries in the Appalachian, Southeast, Delta, and Mountain regions. In particular, agriculture in the Delta and Appalachian regions will face the largest increase in State/regional taxes, which suggests that agriculture in those two regions will decline. The tax cuts for agriculture in the Northeast and Lake States are larger than in any other region, suggesting that agriculture will expand in those two regions.

## Simulated Effects of Tax Reform

Table 9 shows selected simulation results from tax reform at both the Federal and State/regional levels. As expected, agricultural output declines the most in the Appalachian and Delta regions, while agriculture expands in the Pacific region. For the United States, output for high-capital agriculture declines by 0.58 percent, while output for the other agricultural industry expands by 0.40 percent. Food processing expands in the Pacific region as well as in the Delta, Southern Plains, and Mountain regions. For the

United States, high-capital food processing expands by 1.12 percent, and the other food-processing industry expands by 0.10 percent.

High-capital manufacturing expands by 0.22 percent for the United States, while the other manufacturing industry expands by 0.01 percent. Manufacturing expands in the Northeast and Pacific regions, and significantly declines in the Appalachian. The “all other” industry declines by 0.05 percent for the United States.

In our model, welfare effects arise due to allocative efficiency gains from nondistortionary taxation, terms-of-trade changes, and changes in the regional contributions to Federal tax collections. The amount of Federal taxes raised in each region changes because the level of Federal tax rates changes. Thus, under tax reform, some regions may contribute more to the Federal budget, and others may contribute less to the Federal budget.

Table 9 shows that the regions experiencing the largest (in percentage terms) welfare effects from

**Table 10—Tax reform at Federal level**

Tax policy/ industry	North- east	Appal- achian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific	U.S.	ROW
<i>Percent</i>												
Output change:												
Agriculture	-3.06	-2.90	0.73	0.57	-0.70	-1.64	-0.98	0.26	1.50	1.66	-0.26	0.14
Capital-intensive agriculture	-2.49	-4.58	1.33	1.10	-1.22	-1.27	-0.80	1.14	2.13	0.99	-0.46	0.15
Processed food	1.25	-1.80	0.36	-0.95	-0.26	-0.23	-2.38	-0.34	0.19	2.15	-0.01	-0.01
Capital-intensive processed food	1.10	-0.41	1.21	-1.31	-0.98	0.81	-2.58	1.15	0.81	2.20	0.55	-0.10
Manufacturing	1.37	-2.98	0.53	-0.92	-1.08	1.04	-2.30	1.37	0.60	2.53	0.14	-0.11
Capital-intensive manufacturing	1.00	-2.03	-0.04	0.22	-0.16	-0.05	-0.43	0.97	0.58	0.78	0.06	-0.04
All other industries	-0.48	1.24	-0.13	0.34	0.44	-0.14	0.75	-0.21	-0.14	-0.72	-0.06	0.02
Factor price change:												
Land	-1.49	0.80	4.29	3.58	2.40	1.59	3.42	4.03	5.34	3.94	NA	0.27
Labor	-4.25	0.62	-1.41	-1.90	-1.37	-2.15	0.99	-2.75	-3.15	-4.18	NA	-0.08
Capital	0.91	8.12	-0.19	4.39	4.32	-0.17	5.39	-1.40	1.05	-1.41	NA	-0.08
Welfare effects:												
Terms of trade change	-0.09	0.29	-0.02	0.07	0.09	-0.02	0.28	-0.12	0.03	-0.23	NA	-0.04
Income change	-0.92	3.48	-0.24	1.12	1.39	-0.49	2.65	-1.18	-0.36	-1.73	NA	-0.08
Welfare change	-0.82	2.93	-0.24	0.84	1.14	-0.44	2.16	-0.92	-0.32	-1.42	NA	-0.02
<i>Billion dollars</i>												
Welfare index:												
Equivalent variation	-10.05	13.87	-1.01	3.01	8.53	-0.57	2.23	-2.74	-0.68	-11.95	0.62	-0.34

NA—Not applicable.

flattening tax rates are the Appalachian, Northern Plains, Southern Plains, and Pacific regions. In particular, the Appalachian and Northern Plains regions gain in welfare by 3.19 and 2.09 percent, respectively. The Pacific and Southern Plains regions, however, lose in welfare by 1.35 and 0.94 percent, respectively. In monetary terms, the Appalachian region gains \$15.1 billion, while the Pacific and Northeast regions lose \$11.3 billion (1987 dollars) each.

The Appalachian region benefits the most from this simulation because allocative efficiency gains are augmented with a significant improvement in its terms of trade (+0.34 percent) and a reduction in the amount of Federal taxes. The Pacific and Northeast regions lose in welfare because efficiency gains are eroded by deterioration in terms of trade and increased Federal taxes.

The second to last row in table 7 suggests which regions contribute more (or less) to Federal taxes under reform. The Appalachian region's contribution to Federal taxes will decline, as its

overall factor tax rate declines from 32.54 to 28 percent. Regions that experience an increase in their Federal taxes (Northeast, Southeast, Delta, Southern Plains, Mountain, and Pacific) tend to lose in welfare from tax reform. Among those regions, only the Southeast gains in welfare (\$1 billion) because tax reform at the Federal level is not so important for the Southeast.

Tables 10 and 11 decompose the results of flattening tax rates into components. The results suggest Federal tax reform drives the welfare implications of the combined simulation. The only exception to this result is in the Southeast, which gains \$2.3 billion in welfare from reform at the State/regional level but loses \$1 billion from reform at the Federal level.

The national welfare effect of flattening tax rates at the Federal and State/regional level is equal to \$1,621 million (that is, the sum of regional welfare effects in monetary terms in table 9). Reform at the Federal level increases national welfare by \$623 million (table 10), whereas reform at the State level increases welfare by \$1,036 million (table 11). This

**Table 11—Tax reform at State/regional level**

Tax policy/ industry	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific	U.S.	ROW
<i>Percent</i>												
Output change:												
Agriculture	2.69	0.27	-0.44	0.59	0.87	-0.41	0.37	-0.05	-0.67	2.13	0.67	-0.20
Capital-intensive agriculture	0.49	-0.97	-2.39	-2.39	1.38	-2.34	-0.47	-2.05	-1.48	1.48	-0.15	-0.24
Processed foods	-0.34	-0.36	-0.36	0.17	-0.19	0.82	1.95	1.48	0.12	0.19	0.11	0
Capital-intensive processed foods	-1.38	3.52	-1.05	-0.92	-2.44	0.81	0.03	0.22	1.24	0.95	0.59	0.05
Manufacturing	-0.29	-0.47	-0.92	-0.32	0.62	0.47	0.20	-0.03	0.30	-0.37	-0.14	0.17
Capital-intensive manufacturing	1.85	-0.57	-0.47	0.70	-0.61	-0.37	-1.39	-0.38	-2.76	1.35	0.17	0.15
All other industries	0	0.07	0.22	0.08	-0.15	-0.09	-0.18	0	0	0.01	0.01	-0.03
Factor price change:												
Land	3.58	0.69	1.02	2.85	2.30	-1.12	2.80	-3.54	-1.31	3.97	NA	-0.69
Labor	-2.64	1.78	-1.17	-3.63	-1.60	2.29	0.57	-3.04	-0.46	-0.54	NA	-0.18
Capital	3.97	2.42	5.43	5.38	3.15	0.80	2.29	4.11	3.12	2.53	NA	-0.18
Welfare effects:												
Terms of trade change	0	0.06	0.11	0	-0.01	0	-0.10	0.04	0.07	0.01	NA	-0.14
Income change	-0.24	0.39	0.68	-0.24	-0.18	0.19	0.12	-0.08	0.20	0	NA	-0.18
Welfare change	-0.14	0.34	0.53	-0.12	-0.19	0.13	0.02	-0.04	0.13	0.04	NA	-0.04
<i>Billion dollars</i>												
Welfare index:												
Equivalent variation	-1.72	1.62	2.23	-0.43	-1.41	0.17	0.02	-0.11	0.28	0.33	1.04	-0.77

NA—Not applicable.

is a striking result, since it shows that Federal reform dominates State reforms regionally, but the overall benefits of State reforms are larger. This can be explained by a number of factors, which we will only briefly consider.

Federal reform creates a leveling of factor taxes nationally, but shifts overall burdens regionally. Thus, some regions realize a higher tax burden, even as their allocative efficiency of factor use is improved. Since primary factors of production are regionally immobile, the Federal reform creates a new allocative inefficiency, that of geographic allocation.<sup>12</sup> No such result occurs in the State reforms, since relative regional burdens remain fixed.

Table 9 shows that tax reform causes the overall rent received by owners of capital assets (excluding land) to increase in all U.S. regions. As a result, the rate of return (that is, capital rent over price of new capital goods) also increases in those regions. Investment is sensitive to rates of return, and an optimal allocation of investment is achieved when investors in all regions experience the same percentage increase in expected rates of return to capital. Returns to land also increase in all U.S. regions, but less than capital rents (except in the Pacific region), while returns to labor decline in most U.S. regions. These results reflect the fact that flattening of factor taxes shifts the overall burden of taxation toward income from labor services.

Tables 10 and 11 show that the agricultural implications of Federal tax reform are different from those of tax reform at the State/regional level. For the Nation as a whole, Federal tax reform leads to a reallocation of resources from agriculture to other industries. Reform at the State/regional level leads to a decline only in capital-intensive agriculture.

<sup>12</sup>This helps explain how overall welfare effects of Federal tax reform in the model are small, compared with similar reform simulations examined in national models, such as Fullerton and Henderson. A longrun dynamic model would produce greater welfare effects.

**Table 12—Tax reform at the Federal and State/regional level, sensitivity analysis of selected results, trade elasticities at 4 x base values**

Tax policy/ industry	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific	U.S.	ROW
<i>Percent</i>												
Output change:												
Agriculture	-1.42	-2.58	0.59	2.55	0.37	-3.82	0.70	-0.73	1.16	4.48	0.61	-0.09
Capital-intensive agriculture	-2.31	-5.81	-1.76	-1.82	1.19	-5.47	-0.70	-2.58	0.79	3.11	-0.35	-0.11
Processed foods	0.46	-3.19	0.31	-2.08	-0.66	1.37	2.26	2.44	-0.90	2.88	0.04	-0.04
Capital-intensive processed foods	-6.55	14.85	-0.12	-7.43	-11.80	2.05	-6.65	0.63	5.96	3.66	2.28	-0.03
Manufacturing	0.17	-3.26	-0.07	-1.57	0.73	3.08	-1.14	0.76	2.10	1.45	0.04	0
Capital-intensive manufacturing	6.94	-4.79	-1.35	5.22	-1.71	-4.17	-3.16	-2.35	-10.55	2.46	0.24	0.05
All other industries	-0.37	1.02	0.06	0.43	0.05	-0.31	0.11	-0.04	-0.22	-0.57	-0.07	0.01
Factor price change:												
Land	0.15	0.80	5.86	8.31	5.99	-3.68	8.17	-1.88	4.72	10.09	NA	-0.43
Labor	-6.67	1.74	-2.66	-5.61	-3.04	0.22	1.14	-5.48	-3.53	-4.44	NA	-0.21
Capital	4.93	10.25	4.78	9.25	7.21	0.79	7.10	2.82	4.01	1.30	NA	-0.21
Welfare effects:												
Terms of trade change	-0.01	0.11	0.07	0.01	0.02	0.02	0.01	0.03	0.10	-0.04	NA	-0.15
Income change	-1.00	3.37	0.31	0.68	1.09	-0.15	2.36	-1.06	-0.14	-1.44	NA	-0.21
Welfare change	-0.90	3.07	0.24	0.61	0.93	-0.19	2.01	-0.88	-0.21	-1.30	NA	-0.04
<i>Billion dollars</i>												
Welfare index:												
Equivalent variation	-11.04	14.53	1.01	2.19	6.94	-0.24	2.07	-2.63	-0.44	-10.91	1.47	-0.89

NA = Not applicable.

## Sensitivity Analysis

Tables 12 and 13 show sensitivity analysis regarding our trade and allocation of investment specifications. Implementation of the Armington assumptions may artificially insulate U.S. regions from both the national market and international markets. Table 12 shows changes in selected variables due to tax reform under larger trade elasticities. In particular, the elasticities  $\sigma_D$  and  $\sigma_L$  (see fig. 5) are assigned four times the values in their base specification. Larger values for those two sets of elasticities imply that importers in all regions, including the ROW, will be more sensitive to relative price changes when they consider their sources of U.S.-produced commodities. Thus, importers will tend to import more from U.S. regions where relative commodity prices decline due to tax reform. With higher trade elasticities, we expect exports from some regions to change considerably more due to tax reform. Total regional imports, however, are not expected to change more in this simulation because they are an

aggregate of imports from all regions. Furthermore, more price-sensitive imports from U.S. regions will result in U.S. commodity prices changing by more similar amounts. The results in table 12 show that, for some regions and commodities, output changes are considerably different from those in the base simulation in table 9. Changes in the terms of trade are smaller in the simulation with larger trade elasticities. The welfare implications of tax reform under the higher trade elasticities illustrate the significance of terms of trade in our welfare measure. Regions that enjoy better (worse) terms of trade in this simulation experience an increase (decline) in their welfare. With higher trade elasticities, tax reform leads to a decline in overall welfare improvement for the United States; welfare gains decline from \$1,621 million (table 9) to \$1,467 million (table 11).

As we have discussed in the “Macroeconomic Closure” section, the model offers two alternative specifications about the regional composition of

**Table 13—Tax reform at Federal and State/regional level, sensitivity analysis of selected results, alternative investment allocation**

Tax policy/ industry	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern Plains	Southern Plains	Moun- tain	Pacific	U.S.	ROW
<i>Percent</i>												
Output change:												
Agriculture	-0.50	2.57	0.22	0.93	-0.12	-2.56	-0.80	-0.11	0.58	3.33	0.15	-0.12
Capital-intensive agriculture	-0.58	-4.22	-0.43	-0.06	0.66	-2.67	-0.79	-0.34	1.00	3.95	0.10	-0.14
Processed foods	0.83	-1.94	-0.01	-0.71	-0.48	0.23	-0.41	0.86	0.14	1.86	0.02	-0.05
Capital-intensive processed foods	-0.39	3.61	0.13	-2.13	-3.36	1.31	-2.48	1.12	1.86	2.61	0.95	-0.12
Manufacturing	1.15	-2.99	-0.25	-0.92	-0.33	1.16	-1.83	1.21	0.93	1.92	0.10	-0.07
Capital-intensive manufacturing	2.43	-2.52	-0.64	0.85	-0.93	-0.89	-1.79	-0.22	-2.45	1.60	-0.04	-0.03
All other industries	-0.47	1.16	0.07	0.31	0.26	-0.11	0.51	-0.16	-0.14	-0.62	-0.06	0.03
Factor price change:												
Land	2.31	1.88	5.22	7.00	4.92	-0.12	6.62	0.22	3.85	7.48	NA	-0.40
Labor	-6.8	2.30	-2.62	-5.54	-3.00	0.11	1.48	-5.69	-3.62	-4.64	NA	-0.09
Capital	4.71	10.53	4.84	9.29	7.42	0.78	7.46	2.57	3.99	1.04	NA	-0.09
Welfare effects:												
Terms of trade change	-0.01	0.29	0.07	0.03	0.05	-0.01	0.14	-0.09	0.08	-0.20	NA	-0.04
Income change	-1.14	3.69	0.34	0.71	1.17	-0.19	2.60	-1.25	-0.20	-1.64	NA	-0.09
Welfare change	-0.95	3.15	0.22	0.61	0.94	-0.23	2.06	-0.95	-0.22	-1.36	NA	-0.01
<i>Billion dollars</i>												
Welfare index:												
Equivalent variation	-11.58	14.93	0.94	2.18	7.00	-0.30	2.12	-2.84	-0.47	-11.41	0.59	-0.16

NA—Not applicable.

investment activity. The specification that we applied in our simulation assumes that there is a negative relationship between the expected regional rate of return on capital and the amount of investment undertaken in a region. The model manipulates this relationship until rates of return are equalized across regions. In this section, we apply an alternative investment allocation specification where it is assumed that the regional composition of global capital stock will not change due to the simulation performed (that is, the regional allocation of investment is not sensitive to changes in returns to investment).

Table 13 shows that tax reform, under this investment allocation, causes capital rents in the Delta and Southern Plains regions to increase by more than under the alternative investment allocation specification (table 9). As a result, the rate of return (that is, capital rent over price of new

capital goods) increases more in those regions.

When investment is sensitive to rates of return, more (less) investment will flow into regions where the relative expected rate of return increases (declines). An equilibrium is reached when all regions experience the same change in expected rates of return. Thus, less investment is undertaken in those two regions in this simulation than in the base simulation. The regional welfare implications of tax reform do not change considerably for U.S. regions when the allocation of investment is changed. The United States, however, experiences a welfare gain of \$586 million, which is smaller than the U.S. welfare improvement in the base simulation. This result stems from our alternative investment rule which will not produce an increased share of international investment flows to the United States, even though tax reform produces more favorable relative returns on U.S. investment goods.